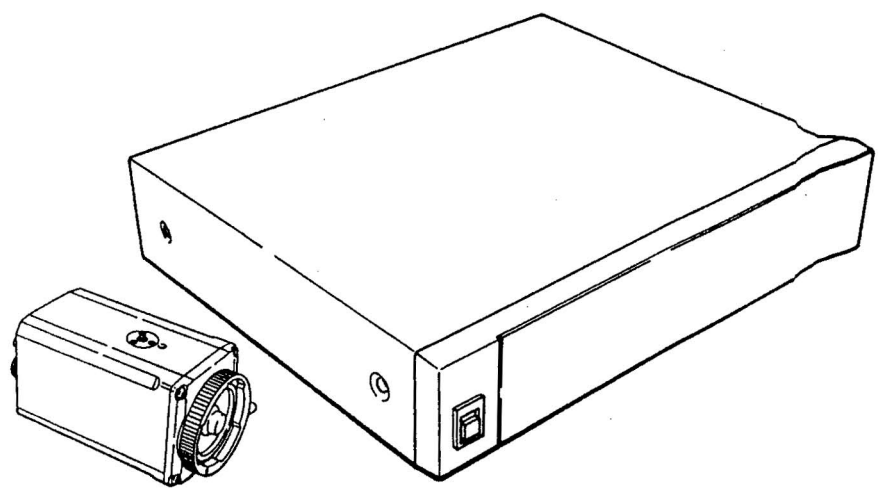
SONY

DIGITAL PHOTO CAMERA

DKC-5000



SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. SPECIFICATIONS

DKC-5000 (Camera)

Imaging element
1/2-inch, 440,000-pixel CCD
Effective image area
795 (H) x 598 (V) pixels
Pixel offset
Vertical and horizontal
Photography system
3-element
Lens mount
1/2" 38 bayonet mount
S/N ratio
56 dB or better
ISO speeds
LIVE mode: AUTO, 100, 200, 400, 800 (equivalent)
STILL mode: 100, 200, 400, 800 (equivalent)
White balance
AUTO (FLASH ON/OFF)
MANUAL (R, B GAIN, –127 to +127
Electronic shutter
LIVE mode: AUTO, 1/25, 1/50, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
STILL mode: 4", 2", 1," 1/2, 1/4, 1/8, 1/15, 1/25, 1/50, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Gamma settings
UPD-7000, ON, OFF, USER1, USER2, USER3
Contrast
– 127 to +127
Input/output terminals
Camera connector: 20-pin
Analog RGB (diagonal color offset)

SYNC
2.0Vpp, 75 (unbalanced)
Lens connector: 6-pin
Remote control unit connector: 4-pin
Viewfinder connector: 8-pin DIN connector
Flash timing: X contact
(terminal voltage: 400V or less)
PC IN connector: Stereo mini-jack
TRIG connector: Stereo mini-jack

Power supply voltage
DC 12V
Current consumption
5.0W
Ambient operating temperature
5 to 35°C
Ambient storage temperature
– 20 to 60°C
External dimensions
70 x 72 x 123.5 mm
Mass
Approx 620 g

DKC-5000 (Digital Photo Camera System)

Input A/D

Quantification table
10-bits/color (R, G, B)
LUT
Gamma - UP-D7000, ON, OFF, User 1/2/3
Output LUT
All 8-bit (R, G, B)

Memory

Image memory size
738 (H) x 576 (V) x 3 (RGB) x 8 (bits)
Standard memory capacity
2 images
Expansion memory capacity DKB-5008)
8 images

External interface

SCSI
SCSI-2 (unbalanced)
Transfer method
Asynchronous transfer only
Data bus width
8bits
Data format
RAM data
RGB pixel-sequential
Image size
1520 x 1144 x 3 (5.2 Mbytes)

(4) Input

Color connector
20-pin connector
Analog RGB (diagonal color offset)
0.7VPP, 75 ohms (unbalanced)
Sync
2.0VPP, 75 ohms (unbalanced)

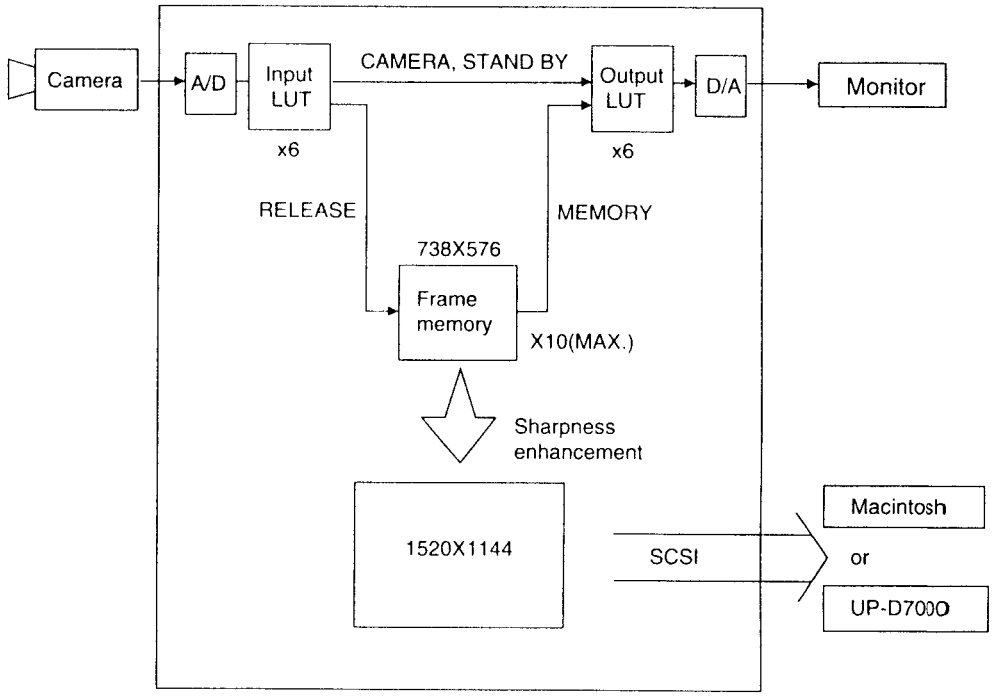
Output

FLASH connector
X contact (terminal voltage: less than 400V)
REMOTE 1
12-pin multi-connector
REMOTE 2
Mini-jack
SCSI connector (SCSI loop-through)
Amphenol, 50-pin x 2
REMOTE 3
D-sub 9-pin
Analog RGB connectors
BNC
Analog RGB BNC connectors
Analog RGB
0.7V_{PP}, 75 ohms (unbalanced)
Sync
4V_{PP}, 75 ohms (unbalanced)Other
Note: Pixel skew offset signal is output as-is.

Others

Camera cable length compensation
10 m/25 m
Power supply voltage
120V (50 Hz/60 Hz) ---- (USA/Canada)
220-240V (50 Hz/60 Hz) ---- (Europe)
Current consumption
1.0A ---- (USA/Canada)
0.7A ---- (Europe)
External dimensions
424 (W) x 356.5 (D) x 105.5 (H) mm
Mass
9 kg

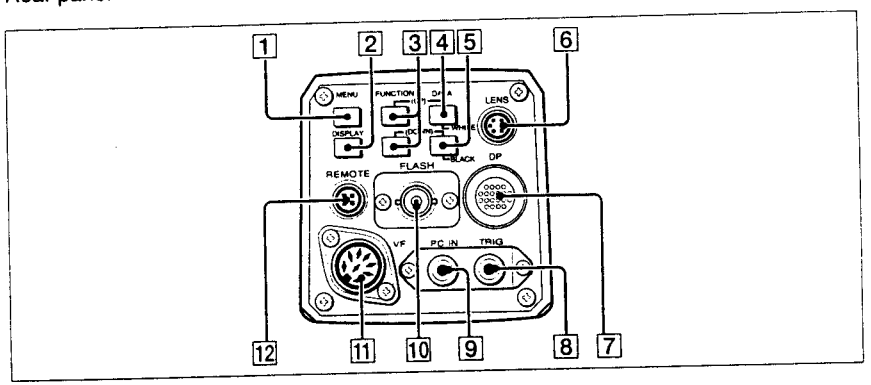
Digital processor block diagram



1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Camera

Rear panel



1 MENU button
This button turns menu display (and Set Up menu) on and off on both the monitor and the viewfinder.
- When no menu is displayed, pressing the MENU button displays the normal menu. Pressing the MENU button and holding it for about 3 seconds displays the Set Up? menu.
- When a menu is displayed, pressing the MENU button clears the menu from the display.

2 RELEASE button
Pressing this button grabs an image into memory.

3 FUNCTION UP/DOWN buttons
When a menu is displayed, pressing these buttons moves the cursor up or down in the menu. These buttons are effective only when a menu is displayed.

4 DATA UP/WHITE button
When a menu is displayed, pressing this button increases numeric values shown for menu parameters in the displayed menu. With ON/OFF parameters, it toggles the setting on or off. When no menu is displayed, this button initiates automatic white balance adjustment.

5 DATA DOWN/BLACK button
When a menu is displayed, pressing this button decreases numeric values shown for menu parameters in the displayed menu. With ON/OFF parameters, it toggles the setting on or off. When no menu is displayed, this button initiates automatic black balance adjustment.

6 LENS connector
Connects to the cable from the lens.

7 DP connector
Connects to the cable from the digital processor.

8 TRIG connector
Connects to the trigger cable (HKA-100RZ) going to a film camera.

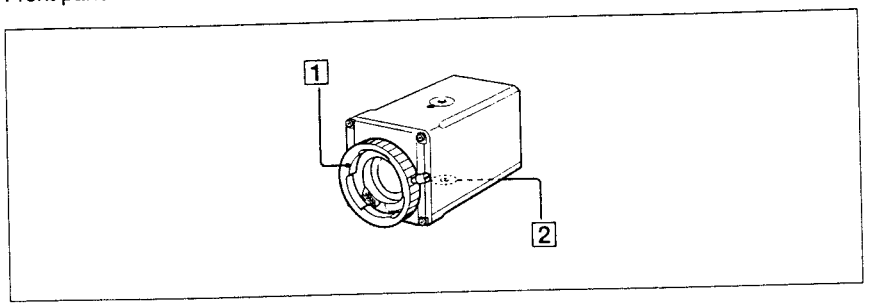
9 PC IN connector
Connects to the flash cable (PC extension cable - sold separately) from a film camera.

10 FLASH connector
Connects to the cable from the flash.

11 VF connector
Connects to the cable from the viewfinder.

12 REMOTE connector
Connects to the cable from the RM-S72 remote control unit.

Front panel

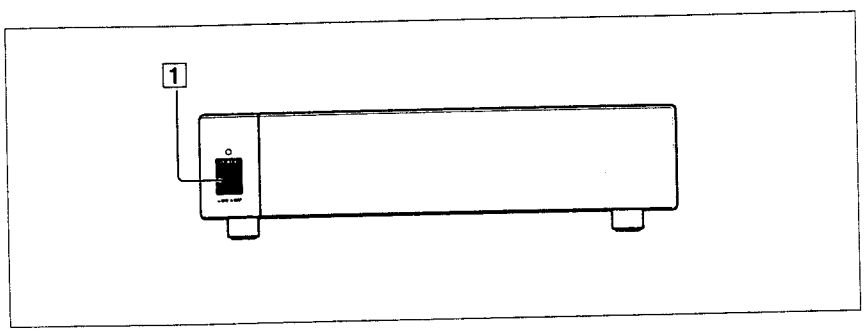


1 Lens mount

2 Retaining screw hole
Hole for the retaining screw used for fastening the camera to the tripod adapter.

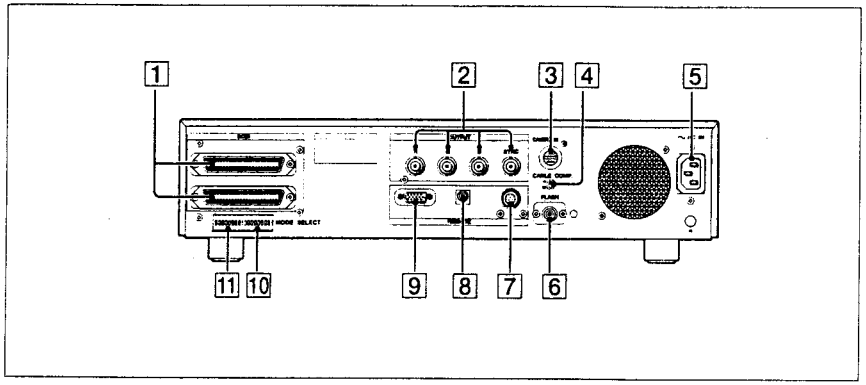
Digital Processor

Front panel



1 Power switch
Turns the digital processor's power on and off.

Rear panel



1 SCSI connector
Connects the digital processor to other SCSI devices (such as a computer or printer).

2 OUTPUT connector (R, G, B, SYNC)
These connectors connect to the cable from the monitor

3 CAMERA IN connector
Connects to the cable from a camera.

4 CABLE COMP switch
Change the setting of this switch according to the length of the camera connection cable. Set it to 5 for a 5-meter cable, and to 25 for a 25-meter cable.

5 AC IN connector
Connects to the AC power cord.

6 FLASH connector
Connects to the cable from a flash.
This connector is not used when the flash cable is plugged into the connector on the camera.

7 REMOTE1 connector
Connects to the RM-930 remote control unit.

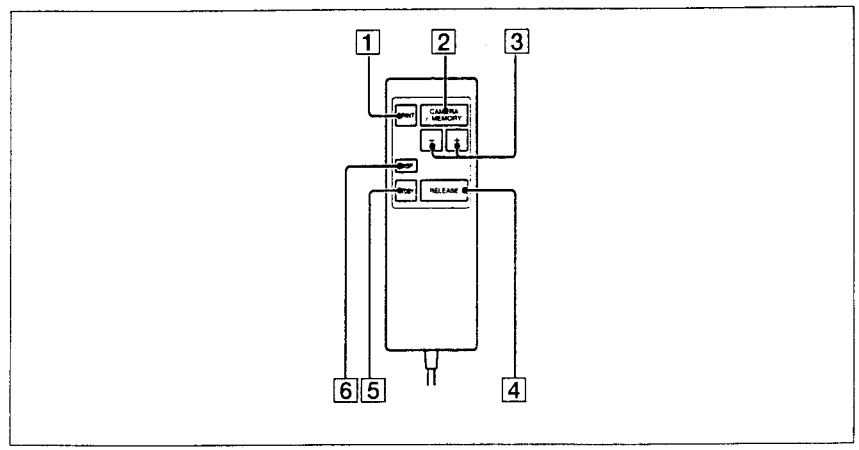
8 REMOTE2 connector
Connects to the cable from a foot switch.

9 REMOTE3 connector
Reserved.

10 DIP switch 2
See page 40 for DIP switch setting procedures.

11 DIP switch 1
See page40 for DIP switch setting procedures.

RM-S72 Remote Control Unit (included)



1 PRINT button
Used for displaying the Print menu and for printing. ("Printing Images" page 24)

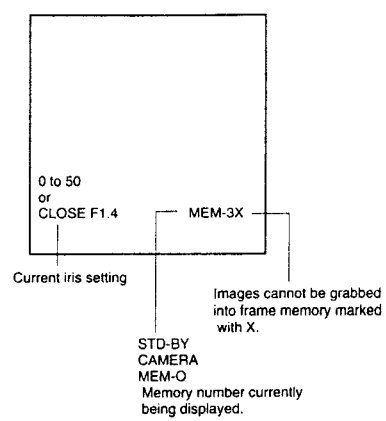
2 CAMERA/MEMORY button
Pressing this button switches the monitor screen between the CAMERA mode and the MEMORY mode.

3 + / – buttons
These buttons set the following values.
STILL iris value: When the monitor screen is in the STANDBY mode or the CAMERA mode, these buttons increase or decrease the STILL iris value.
Memory number: When the monitor screen is in the MEMORY mode, these buttons change the memory number.
Print layout: When the Print menu is displayed, these buttons change the print layout.
Full - Half - Index

4 RELEASE button
Pressing this button grabs an image into memory. This performs the same function as the RELEASE button on the camera.

5 STDBY button
Switches the monitor screen to the STANDBY mode.

6 DISP button
Displays mode information at the bottom of the screen.



RM-930 Remote Control Unit (sold separately)

Remote control of the camera is possible by connecting the RM-930 remote control unit (sold separatly) to the digital processor.

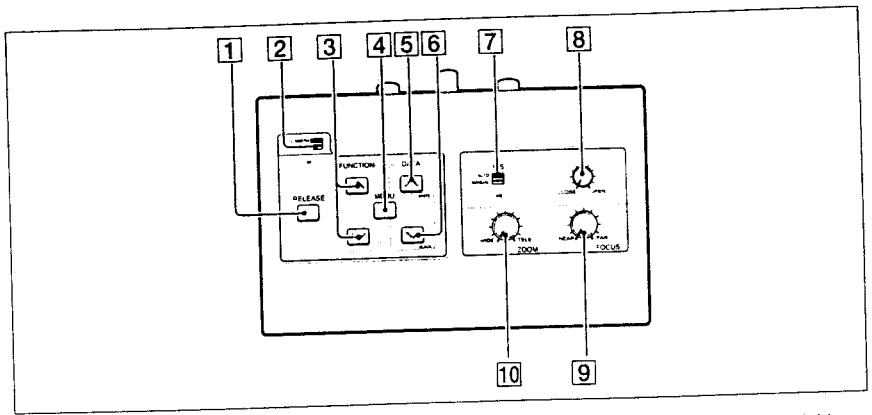
Connection

Using the appropriate cable, connect the CAMERA connector on the RM-930 to the REMOTE1 connector on the digital processor.
A monochrome monitor signal is output from the MONITOR OUT terminal.
Caution: Do not connect anything to the DC IN terminal. Making any connection to this terminal could result in damage the equipment.

Operation

Affix the template provided to the left side of the remote control unit's top. The figure below shows the top of the unit with the template attached.

When the template is affixed, buttons on the top left side have the same functions as buttons with the corresponding on the camera. Setting the CAMERA/REMOTE switch to the remote position enables the RM-930 and disables the buttons on the camera. Setting it to the CAMERA position disables the RM-930 when you want to control operation directly from the camera.



1 RELEASE button
Pressing this button grabs an image into memory.

2 CAMERA/REMOTE switch
Set this switch to REMOTE when using the RM-930. With the REMOTE setting, buttons on the camera are disabled. Set the switch to CAMERA if you want to use the buttons on the camera. With the CAMERA setting, the RM-930 is disabled.

3 FUNCTION ∧/∨ buttons
When a menu is displayed, pressing these buttons moves the cursor up or down in the menu. These buttons are effective only when a menu is displayed.

4 MENU button
This button turns menu display (and Set Up menu) on and off on both the monitor and the viewfinder.
- When no menu is displayed, pressing the MENU button displays the normal menu. Pressing the MENU button and holding it for about 3 seconds displays the Set Up? menu.
- When a menu is displayed, pressing the MENU button clears the menu from the display.

5 DATA ∧/ WHITE button
When a menu is displayed, pressing this button increases numeric values shown for menu parameters in the displayed menu. With ON/OFF parameters, it toggles the setting on or off. When no menu is displayed, this button initiates automatic white balance adjustment.

6 DATA ∨ / BLACK button
When a menu is displayed, pressing this button decreases numeric values shown for menu parameters in the displayed menu. With ON/OFF parameters, it toggles the setting on or off. When no menu is displayed, this button initiates automatic black balance adjustment.

7 IRIS switch
This switch cannot be used. (It is used only when using a video camera.)

8 IRIS knob
Turning this knob to the left closes the iris, and turning it to the right opens it.

9 FOCUS knob
This knob has no function with a standard lens. With an power focus lens, it adjusts the focus. The focus range is from 0 (near) to 255 (infinity).

10 ZOOM knob
This knob has no function with a standard lens. With an power zoom lens, it adjusts the zoom. The zoom range is from 0 (wide angle) to 255 (telephoto).

Note
that, depending on the characteristics of the lens being used, operation of the knob may not consistently correspond with operation of the lens.

1-3. SYSTEM FEATURES

The DKC-5000 digital photo camera is a system for processing and storing images captured with a still-image digital camera. Stored images can be output to a printer or sent to a computer for further processing via a SCSI bus.

Features of the system are as follows.

- The camera head contains three 1/2-inch CCD units, each of which contains 440.000 picture elements. A combination of element offset and high-precision microtechnology enables vertical and horizontal resolutions of 800 TV lines when the camera is used at normal temperature, 20°C/68°F).
- By adding expansion memory, the system is capable of storing up to 10 images, making it easier to select from between a number of shots taken in succession.
- The system connects directly to its UP-D7000 digital printer without any intermediary computer.
- Use of a 10-bit look-up table during A/D conversion allows a wide degree of freedom in expression of tone.
- Programmable dynamic range (gamma and knee).
- Special lens used with the camera has extremely light focus and zoom ring movements, allowing smooth manual adjustment.
- Procedures for using the camera are quite similar to those used with conventional cameras, allowing the digital camera to be used comfortably by photographers lacking experience with video cameras or digital equipment.
- Use of a 1/2-inch FB 38-mm bayonet-type lens mount makes it possible to use ordinary 1/2-inch lenses in addition to the system's optional VCL-712BXS zoom lens. By using an adapter, it is also possible to use 2/3-inch lenses.
- Flash photography is possible using X contact output.
- Using release synchronization, a film camera (the Mamiya RZ-67) can be used for proofing.
- All functions of the system can be controlled using add-on software (a plug-in module) that works under Photoshop on the Macintosh.

Examples of Applications

The basic system is composed of the following parts.

Portrait system

The figure below shows the digital camera system together with a full-color digital printer in an instant portrait system. After taking a number of shots, images can be checked on the monitor and selected for printout.

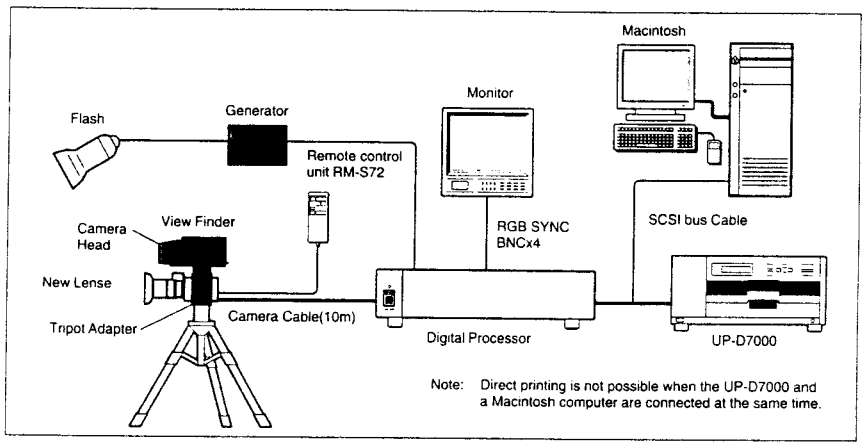
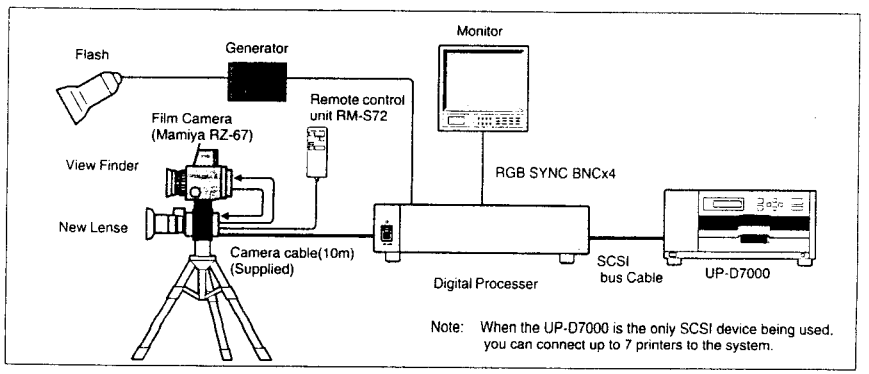


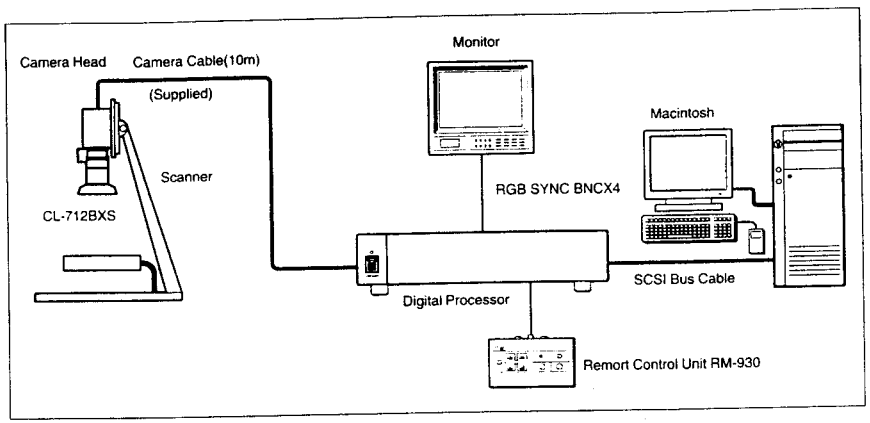
Photo proof system

In the photo proof system, the digital photo camera is used to quickly check shots taken together with a film camera. he ability to check images increases work efficiency of developing, enlarging, and printing.



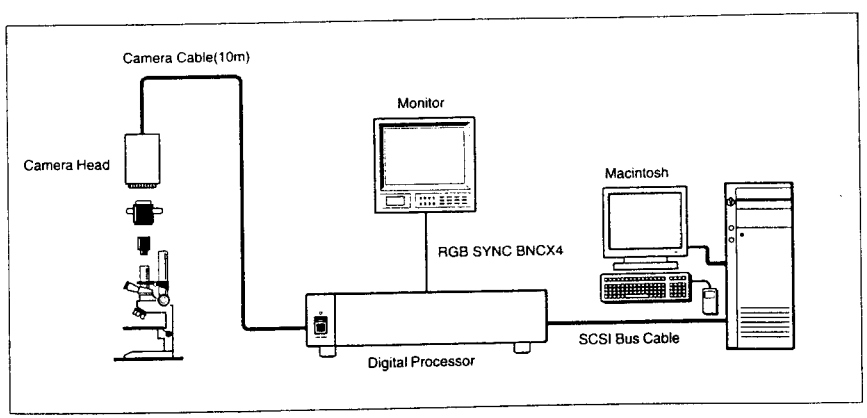
Still image filing system

In this system, the digital photo camera is used together with a computer to used for storing image data to make up an image filing system.



Medical image input system

This system is used to capture image data for use in medical applications.



1-4. MONITOR SCREEN DISPLAY MODES AND CAMERA MODES

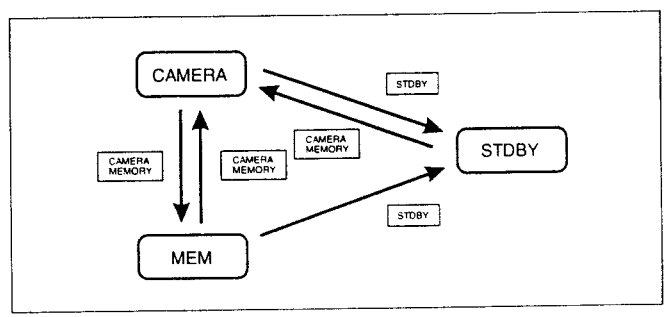
This section explains the relationship between the monitor's display modes and the camera modes.

Display modes

The monitor and viewfinder screens have three display modes. The current mode appears at the bottom of the screen when you press the DISP button on the remote control unit.

- CAMERA mode (CAMERA): In this mode, the live image viewed by the camera with the iris fully open is displayed directly on the viewfinder and monitor screens. When you push the RELEASE button with display in this mode, it takes a moment for the iris to change to the set value before the image is grabbed into memory.
- MEMORY mode (MEM): In this mode, images stored in memory are displayed on the viewfinder and monitor screens. This is also the mode used for switching between image memories.
- STANDBY mode (STDBY): In this mode, the camera displays images viewed at the set iris value on the viewfinder and monitor screens. Pressing the RELEASE button in this mode immediately grabs an image into memory.

Display mode switching is done with by pressing the CAMERA/MEMORY and STDBY buttons on the remote control unit. The relationship between button operation and mode transitions is as follows.



Camera modes

Broadly speaking, the camera has two modes of operation: the LIVE mode and the STILL mode.

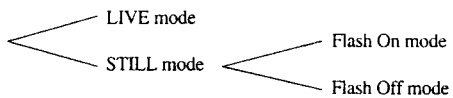
LIVE mode

The LIVE mode is used for checking the subject composition prior to taking photographs.

Whenever the camera is in the LIVE mode, the iris of the lens is kept fully open. The brightness of the image is determined by the camera's ISO speed setting and the shutter speed setting.

STILL mode
The STILL mode is used for taking pictures.
When the camera is in the STILL mode, the lens iris is stopped down to the preset value.
Further, the STILL mode includes two sub-modes: the FLASH ON mode and the FLASH OFF mode.
The FLASH ON mode is used when taking photographs with a flash. When the camera is in the FLASH ON mode, the color temperature is automatically set to 5600K, and the electronic shutter speed is set to 1/25 second.
The FLASH OFF mode is used for taking non-flash photographs. When the camera is in the FLASH OFF mode, a number of settings are the same as in the LIVE mode.

The camera maintains a number of settings independently for different modes.



Relationship between display modes and camera modes

The camera mode changes along with the monitor display mode. For example, when the digital processor is switched to the CAMERA mode, the camera automatically switches to the LIVE mode and the monitor displays the image viewed by the camera.
When the digital processor is switched to the STANDBY mode, the camera automatically switches to the STILL mode and the monitor shows the image viewed by the camera.
The relationship between the display mode and the camera mode is as shown in the table below.

Display mode	Camera mode	Monitor display
CAMERA	Live	Camera image
STANDBY	Still	Camera image
MEMORY	Live or Still	Frame memory image

Notes
- When display is switched to the MEMORY mode, the camera mode does not change.
- The display mode is not affected by changing the camera between the FLASH ON and FLASH OFF modes.

1-5. ABOUT THE OPERATION

Under ordinary circumstances, you can accomplish the same operation either from the camera or from the connected computer. Choose whichever method of operation is more convenient. For example, if you are using the digital photo camera in a photo proofing system and you do not need to process the images by computer, all operations from photography to printout can be controlled from the camera.

This section explains the following operations:
- Turning on the power (page 12)
  Explains the sequence in which the digital processor and connected devices should be pousered on On Off.

- Contrilling the system without leaving the camera (page 13)
  Explain procedures for controlling operation entirly from the camera for those whose style of work is centered around camera.

- Contrilling the system from the computer (page 29)
  Explains procedures for controlling operation from the computer. These procedures are useful when editing images.

- Using digital processor as a photo proofing system (page 33)
  Explains special procedures required in order to use the digital processor in a photo proofing system.

1-6. TURNING THE POWER ON/OFF

Turn the digital processor and peripheral devices on and off in the following sequence.

Turning on the Power

Before using the system for the first time, make sure that the DIP switches are properly set before turning on the power. (page 40)

1 First, turn on peripherals such as the printer and monitor.

2 Next, turn on the digital processor.
(The system beeps once when you turn on the power.) When BEEP is set On by DIP switch, the processor beeps twice after start-up is completed to indicate that the system is ready for use.

3 If you are using a computer, turn on the computer's power.

Note

Please note that, if you turn on the computer before hearing the double beep from the digital processor (indicating that the digital processor is ready for use), the computer may fail to start up properly.

Turning off the Power

Turn off the power as follows.

1 When using a computer, turn off the computer's power.

2 Turn off the digital processor.

3 Turn off peripheral devices, such as the printer and monitor.

1-7. CONTROLLING THE SYSTEM WITHOUT LEAVING THE CAMERA

In order to control the system from the camera, use the controls on the camera together with the RM-S72 remote control unit provided with the system.

This section explains the following aspects of camera and remote control unit operation.

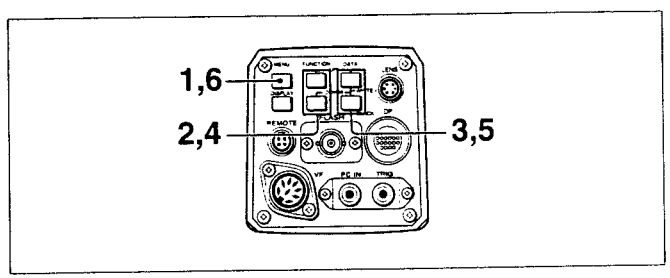
- Setting the camera (page 13)
- Adjusting white balance (page 15)
- Composing and focusing the picture (page 20)
- Adjusting the iris (page 20)
- Taking picture (page 21)
- Viewing picture (page 23)
- Printing Images (page 24)
- Adjusting the black balance (page 27)

Note

Before using the camera for the first time, be sure to make the black balance adjustment.

Making Camera Settings

Before taking pictures, set the color temperature and camera illumination conditions.



1 Press the MENU button on the camera.
The normal menu appears.

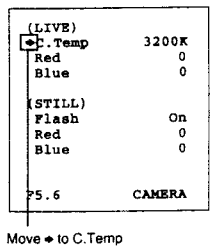
```
(LIVE)
◆C.Temp        3200K
 Red              0
 Blue             0

(STILL)
 Flash           On
 Red              0
 Blue             0

F5.6          CAMERA
```

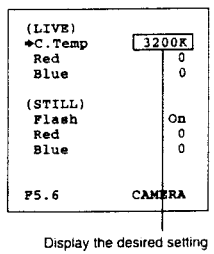
Continue to next page ➡

2 Press the FUNCTION UP, DOWN buttons to move the cursor ➧ to C.Temp.

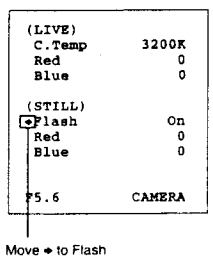


3 Select the color temperature for the LIVE mode by pressing the DATA UP, DOWN buttons.

Type of lighting used	Color temperature
Tungsten light	3200K
Sunlight, fluorescent light	5600K

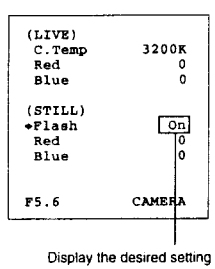


4 Press the FUNCTION UP/DOWN buttons to move the cursor ➧ to Flash.



5 Select whether or not the flash will be used by pressing the DATA UP, DOWN buttons.

Illumination condition	Setting
When using flash	On
When not using flash	Off



Note

The color temperature setting used in the STILL mode is the same as that set for the LIVE mode. When Flash On is selected, the color temperature is fixed to 5600K.

6 Press the MENU button to cancel menu display.

Adjusting the White Balance

In order to obtain natural-looking color rendition, you must adjust the white balance before using the camera for the first time and whenever lighting conditions change. The camera is designed to make automatic, independent white balance adjustments for mal light and flash. Settings made are stored for about 10 years even when the power is turned off.

When Flash is On

When Flash is On, white balance adjustments must be made separately for normal light and flash. The normal light white balance adjustment is needed for verifying photo composition in the CAMERA mode. Flash white balance is needed for taking pictures with flash lighting.

When Flash is Off

When Flash is Off, only normal light white balance adjustment is necessary.

Light Sources and Display Modes Used for Adjusting White Balance

When Flash is On, the light source used for adjusting white balance depends on the display mode. When Flash is Off, normal light is used for white balance adjustment regardless of the display mode.

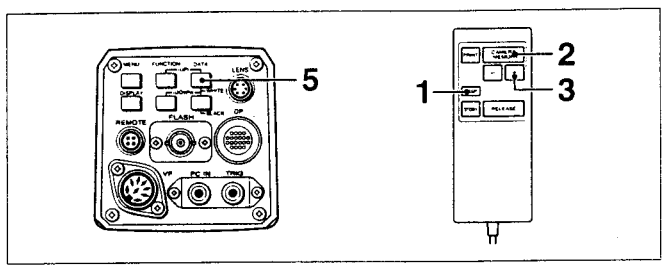
Illumination condition	Display Mode	
	CAMERA MODE	STANDBY MODE
Flash ON	Normal light	Flash light
Flash Off	Normal light	Normal light

White Balance Adjustment with Normal Lighting

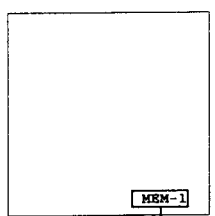
This section describes procedures for adjusting white balance for normal lighting. This procedure is also used to make the normal light white balance adjustment when using flash.

Check Before Starting

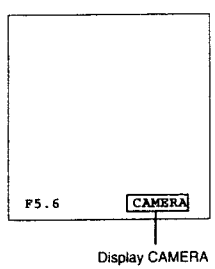
Make sure all camera settings are made before adjusting the white balance.
(page 13)



1 Press the DISP button.
The mode display appears.



2 When Flash is On
Press the CAMERA/MEMORY button to switch to the CAMERA mode.



When Flash is Off

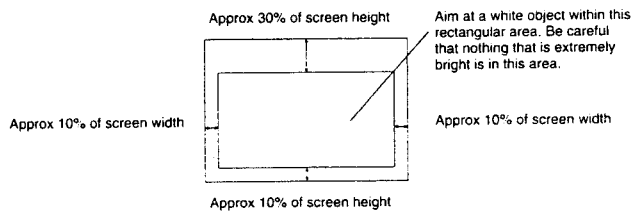
White balance adjustment is possible either in the CAMERA mode or the STANDBY mode.

3 Adjust the iris setting of the lens.

Lens type	Procedure
VCL-712BXS or other lens with automatic iris	Set lens switch to AUTO
Lens with manual iris	Set appropriate iris value

When in the STANDBY mode with Flash Off selected, adjust the lens iris using the + and – buttons on the remote control unit before adjusting the white balance.
(page 20)

4 Duplicating the lighting conditions under which you will take the subject, zoom in on a white object (such as a white chart or white cloth) to where the screen is completely white.


Approx 30% of screen height
Aim at a white object within this rectangular area. Be careful that nothing that is extremely bright is in this area.
Approx 10% of screen width
Approx 10% of screen width
Approx 10% of screen height

5 Initiate adjustment by pressing the WHITE button. When adjustment is completed, the message "WHITE:OK" appears on the viewfinder and monitor screens.

Note

Regardless of whether Flash is On or Off, the camera automatically compensates for brightness during white balance in the CAMERA mode as long as both ISO and the shutter speed are set to AUTO. With settings other than AUTO, first set an appropriate brightness level.

White Balance Adjustment for Flash

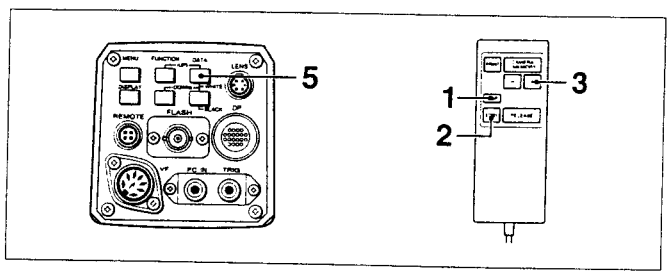
When Flash is On, white balance is adjusted while triggering the flash.

Check Before Starting

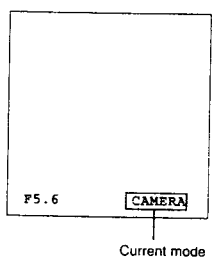
Make sure all camera settings are completed before adjusting the white balance.
If any settings are not completed, make them as explained on at page number indicated below.

- Camera settings (color temperature and illumination conditions) (page 13)
- Flash trigger interval (page 45)

Please note that white balance adjustment will not work smoothly unless the set flash interval exceeds the charging time of the flash.

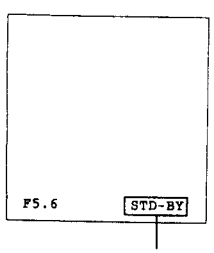


1 Press the DISP button.
The mode display appears.



Current mode

2 Press the STDBY button to switch to the STANDBY mode.

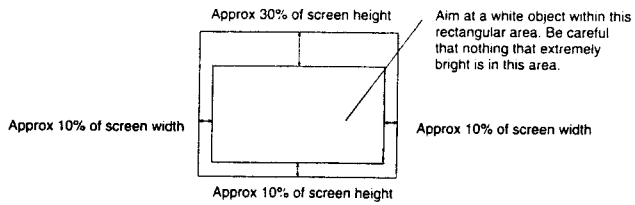


Switch to the STD-BY mode

3 Adjust the lens iris.

Lens type	Procedure
VCL-712BXS or other lens with automatic iris	Set lens switch to AUTO and use the + and – buttons on the remote control unit to make an appropriate iris setting.
Lens with manual iris	Set appropriate iris value

4 Duplicating the lighting conditions under which you will take the subject, zoom in on a white object (such as a white chart or white cloth) to where the screen is completely white.


Approx 30% of screen height
Aim at a white object within this rectangular area. Be careful that nothing that extremely bright is in this area.
Approx 10% of screen width
Approx 10% of screen width
Approx 10% of screen height

5 Initiate adjustment by pressing the WHITE button. button for about one second. The flash triggers from 4 to 10 times as white balance is adjusted. Adjustment is completed within approximately 10 to 20 seconds, then "WHITE:OK" is displayed.

Note

Be sure to do white balance adjustment before starting up the plug-in module on the computer.

When adjustment fails

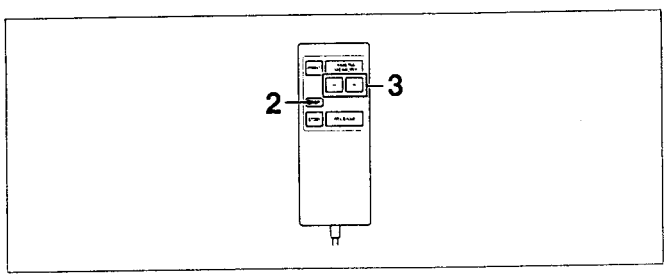
If automatic white balance adjustment fails, one of the following error messages appears. Check the explanation given for each message, then try adjustment again.

Error message	Explanation
WHITE : NG	Unable to adjust white balance.
WHITE : NG LEVEL Low	Video level too low.
WHITE : NG LEVEL High	Video level too high, or subject too bright.
WHITE : NG C.TEMP High	Subject color temperature too high.
WHITE : NG C.TEMP Low	Subject color temperature too low.

Adjusting Framing and Focus

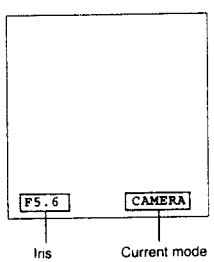
Aim the camera at the subject and adjust the zoom and focus while watching the subject in the viewfinder.
Lenses other than the VCL-712BXS that are capable of auto-zoom and auto-focus can be controlled from the RM-930 remote control unit (Sold separetely). When adjusting such a lens manually, set the IRIS switch to MANUAL.

Adjusting the iris

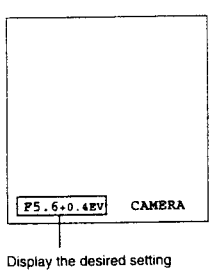


1 Set the lens' IRIS switch to AUTO.

2 Press the DISP button. The mode display appears.



3 Set the iris by pressing the + and – buttons.



The iris setting changes as indicated below according to whether you are using the VCL-712BXS or an other lens.

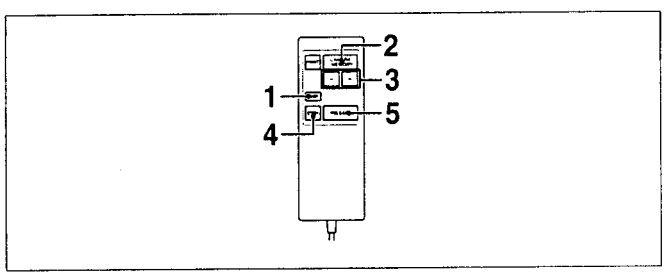
Lens type	Iris setting
VCL-712BXS	CLOSE to F1.4 (in 0.2-EV steps)
Other lens	0 to 51 (0: CLOSE, 51: OPEN)

Note

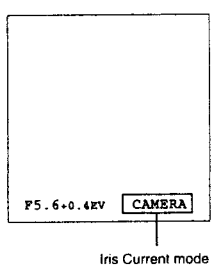
The F number is accurately set when using the VCL-712BXS. However, with other lenses, variances in lens characteristics make it impossible to assure that a given F number will result for a given setting. However, this is of no concern if you start with the iris fully open, then stop it down until you reach the desired value.

Taking pictures

When the timing of shutter release is critical, as when taking action shots of people or other moving objects, stop the iris down in advance to ensure that the image you see when you press the release button is the one grabbed by the system. When taking shots of stationary objects, you can have the camera stop down the iris and grab the image in one operation.

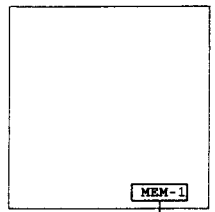


1 Press the DISP button. The mode display appears.



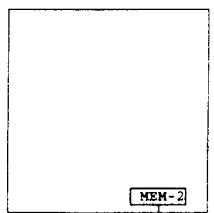
Continue to next page ➡

2 Press the CAMERA/MEMORY button to switch to the MEMORY mode.



Switch to MEM

3 Use the + and – buttons to select the memory into which the image is to be grabbed.



Display the desired memory

4 Press the STDBY button.
The iris stops down to the preset setting. Depending on the setting, this may darken the image appearing in the viewfinder and monitor. When 712BXS is selected, it takes about 0.5 second for the iris to stop down to the set value. If Others is selected, the message "WAIT" appears and it takes about 2 seconds for the iris to stop down to the set value.

You will hear a double beep when iris setting is completed.

This step is not necessary if you are doing iris stop-down and image grabbing all in one step; go on to step 5.

5 Press the RELEASE button.
The image is grabbed into memory.
If mode display is OFF and the Cont release mode is selected, the monitor momentarily displays the number of the selected memory.

If you skipped step 4
If you skipped step 4, the iris is stopped down automatically and the image is grabbed into memory.

Taking pictures with the Cont release mode selected in the SETUP-MODE menu
When Cont is selected as the release mode in the SETUP-MODE menu and the DKB-5008 frame memory board is installed, up to 10 pictures can be successively stored in memory by repeatedly pressing the RELEASE button. In the Cont release mode, the amount of time required for image grabbing when you press the RELEASE button depends on whether the camera waits for the next exposure in the STANDBY mode or in the CAMERA mode. Use the former mode if exposure timing is important, and the latter if you want to confirm picture composition for each shot. You can switch between the two modes by selecting On or Off as the Iris Open setting in the Camera menu.

Taking pictures in the Single release mode
When you press the RELEASE button repeatedly with Single selected as the release mode, only the last image taken is stored in the selected memory.

Viewing Pictures

You can check photos taken by displaying them on the screen of the viewfinder or monitor.

Viewing pictures taken in the SINGLE release mode

Pressing the RELEASE button automatically switches display to the MEMORY mode, allowing the photo to be confirmed immediately.
As long as you do not press the CAMERA/MEMORY button, the camera remains in the STANDBY mode. This makes it unnecessary to press the STDBY button, so you will still obtain correct exposure timing if you retake the picture by pressing the RELEASE button again.

Viewing pictures taken in the CONT release mode

1 Switch to the MEMORY mode. The image stored in memory is displayed on the viewfinder and monitor screens.

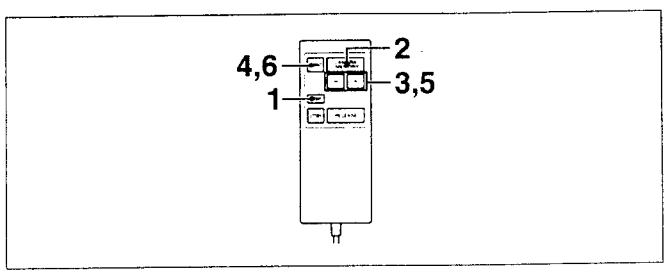
2 Press the + and – buttons.
This switches between memories containing different images.

Printing images

By connecting the UP-D7000 digital printer to the digital processor, you can print out images contained in memory by remote control. This is called direct printing. Printing is not possible during image data transfer.

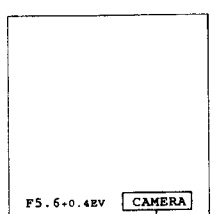
Notes

- Direct printing is not possible when a Macintosh computer and the UP-D7000 are connected to the digital processor at the same time. In this case, print using the plug-in module for printer output (UPS-7001H) or the driver selected through the Chooser (UPS-7002H).
- When you want to print, turning on the digital processor's power after setting direct printing to ON with the DIP switches of the digital processor. (page 40)
  Also, make sure that the UP-D7000 is the only device present on the SCSI bus other than the digital processor.



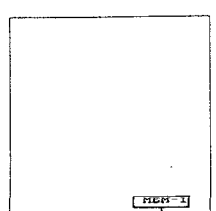
1 Press the DISP button. The mode display appears.

In the MEMORY mode, display the image to be printed.



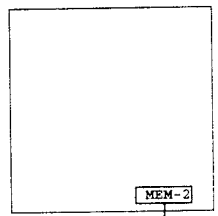
Current mode

2 Press the CAMERA/MEMORY button to switch to the MEMORY mode.



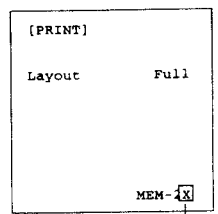
Switch to MEM

3 Use the + and – buttons to select the image to be printed.



Display the desired memory

4 Press the PRINT button.
The PRINT menu appears.

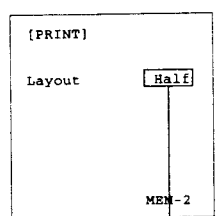


During image data transfer, an X mark is displayed here to indicate that image grabbing is not possible.
The X disappears when printing is completed.

If the PRINT menu does not appear

Image printing is not possible during transfer of image data. Wait until image transfer is completed.

5 Select the print size using the + and – buttons.

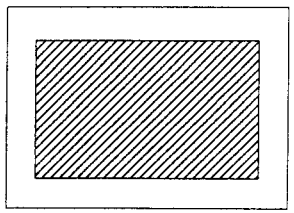


Select the desired size

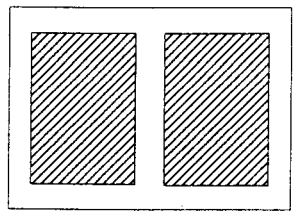
Continue to next page ➡

You can select from among full size, half size, and index size.

Full size (Full)



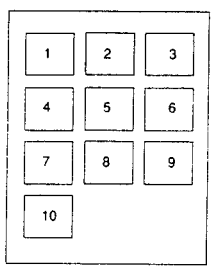
Half size (Half)



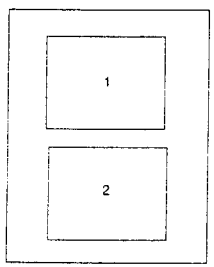
Same two images

Index size (Index)

With 10 frame memories (with the optional DKB-5008 memory board installed)



With 2 frame memories



6 Press the PRINT button. The processor beeps and the image data is transferred to the digital printer for printing. Image grabbing into the selected memory is not possible until transfer is completed.

To repeat image printing

To print the selected image a second time, repeat steps 5 and 6.
If you do not press any button, the PRINT menu disappears after about 4 seconds. If this happens, repeat steps 4 to 6.

To end the print mode

To end the print mode, simply wait for about 4 seconds and the PRINT menu disappears.

If you attempt to print from an empty memory

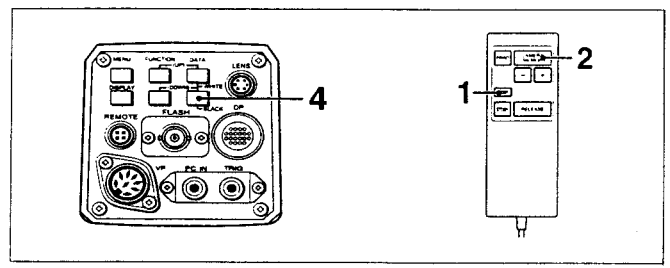
If you select an empty memory, an error message appears and nothing is printed if you select full or half-size prints in step 5.

Adjusting the black balance

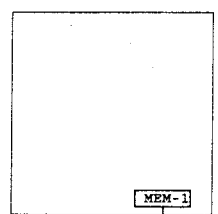
Black balance adjustment is required only in the following situations.

- When using the camera for the first time
- When switching from one camera to another one
- When you have not used a camera for an extended period of time
- When ambient temperature changes greatly, such as may happen when the seasons change

The black balance setting is maintained even when the power is turned off for a maximum of about 10 years.

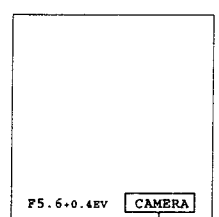


1 Press the DISP button. The mode display appears.



Current mode

2 Press the CAMERA/MEMORY button to switch to the CAMERA mode.



Switch to CAMERA

Continue to next page ➡

3 Verify that the lens's IRIS switch is set to AUTO. During black balance adjustment, the lens stops down automatically.

Note

If the lens is manually operated, stop the iris down all the way.

4 Press the BLACK button. When adjustment is completed, the message "BLACK:OK" appears.

During adjustment, you may observe some flicker on the viewfinder and monitor screens. This is normal.

When adjustment fails

If automatic black balance adjustment fails, one of the following error messages appears. Check the explanation given for each message, then try adjustment again.

Error message	Explanation
BLACK : NG	Unable to adjust black balance.
BLACK : NG IRIS CLOSE ?	Light entered the lens because the iris was not fully closed.

1-8. CONTROLLING THE SYSTEM FROM A COMPUTER

When using this system to produce image data for use in publishing applications or for processing on a computer, you can control practically all operation from the computer. This section explains how to operate the system using the plug-in module that is provided for use with Adobe Photoshop 2.5.

Check before installing

The following operations cannot be done from the computer. Do them at the camera before starting.

- Set the lens switch to AUTO.
- Aim the camera at the subject.
- Adjust picture composition and focus (when using the VCL-712BXS or other lens that does not have an automatic focusing function).
- Ajusting white balance and black balance. (pages 15 and 27)

Before you Begin

Before starting, you must set up the software operating environment and install the software.

System configuration

The following system configuration is necessary in order to use the plug-in module.

Hardware

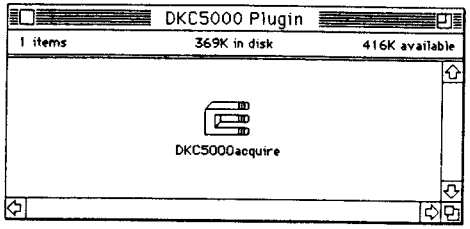
- A Macintosh series computer with at least 8 MB of memory and a hard disk (preferably, a Macintosh Quadra 800 or higher, with 16 MB or more of memory, a hard disk of 500 MB capacity or greater, and a full color video board).
- The Sony DKC-5000 digital still camera system

Software

Adobe Photoshop 2.5

Installation procedure

The Adobe Photoshop 2.5 plug-in module is contained on the Software floppy disk. Copy the module into the Photoshop plug-in modules folder.



Installation procedure

Copy the plug-in module into the folder specified in Photoshop as the plug-in module folder.

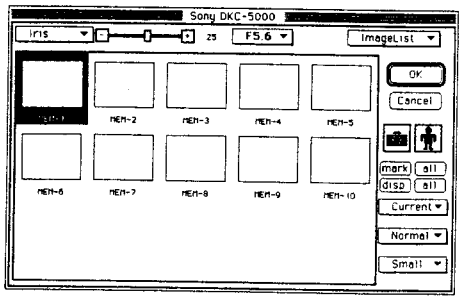
Starting up the Software

Display the screen used for controlling the system as follows.

1 Start up Photoshop.

2 From Photoshop's File menu, select Grab (the input plug-in).

3 From within Acquire (the input plug-in), open the "Sony DKC-5000..." menu. A dialog box like the following appears.



This dialog box is referred to as an image list panel.

Note

MEM-1 through MEM-10 are displayed only when the DKB-5008 frame memory board is installed. When the DKB-5008 is not installed, only MEM-1 and MEM-2 are displayed.

Adjusting the Iris

Computer control over the iris is possible only when using a lens that is equipped with an automatic iris. With other lenses, the iris must be adjusted using the aperture ring on the lens.

The iris setting changes as indicated below according to whether you are using the VCL-712BXS or an other lens.

712BXS: CLOSE to F1.4 (in 0.2-EV steps)
Others: 0 to 51 (where 0 is fully closed and 51 is fully open)

Note

Note that, although the F number is accurately set when using the VCL-712BXS, characteristics of other lenses make it impossible to assure that a given F number will result for a given setting. However, you can always obtain consistent results by starting with the iris fully open, then stopping it down until you reach the desired value.

1 Select "Iris" in the menu at the upper left of the control dialog.

2 Drag the slide bar left or right, or click on the + or – buttons.
The iris value to the right of the slide bar changes, reflecting the change in the lens' iris setting.

Taking Pictures

1 Display the image list panel.

2 Click on the memory into which the image is to be saved.

3 Click on the (STANDBY) button.

The camera switches to the (STANDBY) mode.

4 Click on the (RELEASE)button.

The image is grabbed into memory and a miniature of the image is displayed in the image list panel of the computer and monitor.

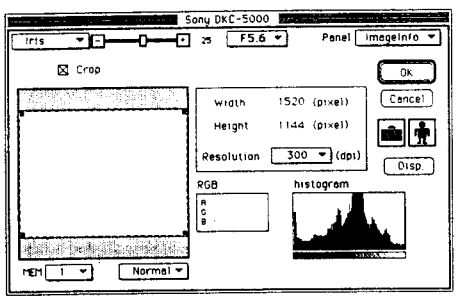
Transferring Images to Photoshop

1 From the image list panel, click on the memory containing the image to be transferred.
Simply click on one memory if only one image is to be transferred. If you want to transfer multiple images, click on the [mark] button after clicking on each memory to be transferred. If you want to transfer all images, click on the [all] button.

2 Click on the [OK] button.
The image(s) is transferred to Photoshop.

Cropping Images

1 Pull down the panel selection menu and select the image information panel.



2 Click on the Crop check box.
Lines indicating the crop area appear in the miniature image display box.

3 Set the size and position of the cropping area with the mouse.
You can set the size of the cropping area by moving its sides with the mouse.
You can move the cropping area by moving the cursor inside the area and dragging with the mouse.

1-9. USING THE DIGITAL PROCESSOR AS A PHOTO PROOFING SYSTEM

When using this system for proofing photos, switch the digital processor to the photo proof mode before taking photographs. This section explains how to use the digital processor as a photo proofing system.

Limitations

The following restrictions apply when using the digital processor in the photo proof mode.
- The FLASH mode cannot be turned off.
- The RELEASE mode cannot be switched to Single.
- The RELEASE mode's Iris Open setting cannot be turned off.

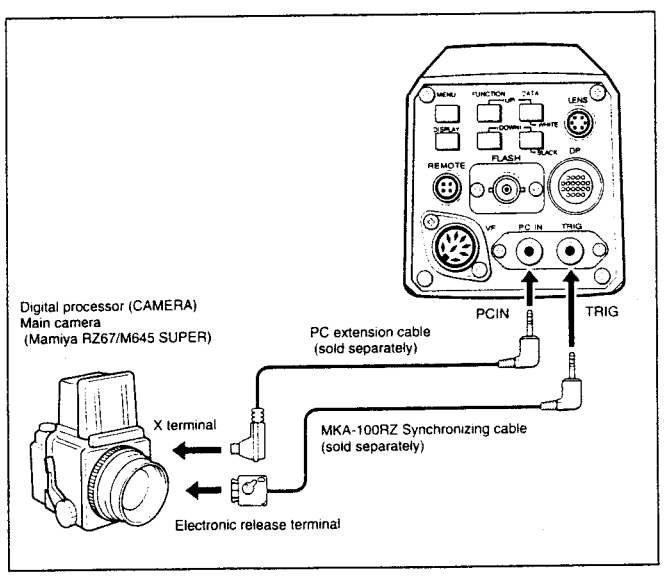
These restrictions apply even if RESET is selected.

Before Turning on the Power

Do the following before turning on the power.

1 Set the digital processor's DIP switch 2-2 (Photo Proof) to ON. (page 40)
This places the digital processor in the photo proof mode.

2 Connect the main camera to the digital processor's DKC-5000 camera.



Note

Procedures for using the main camera are described in the instruction booklet accompanying the main camera.

Taking Photographs

The procedure for taking photographs is as follows.

Note

Before taking photos for the first time, do steps 1 through 4 below. This procedure "trains" the digital processor to accommodate the camera's shutter timing (shutter lag). Subsequently, skip steps 1 to 4 and start with step 5.

Unless you switch to a different camera, steps 1 through 4 need only be done once. However, you will need to do steps 2 through 4 again if you switch cameras.

1 Turn on the digital processor.

2 Make the main camera ready for shutter release.

3 Check that the display shows "Push [RELEASE]".

Note

In this condition, camera settings cannot be changed, nor can white or black balance be adjusted.

4 Press the RELEASE button.
The digital processor beeps twice, then the monitor displays OK.

Notes

- At this point, the selected RELEASE mode operation is not performed and no picture is grabbed into memory.
- You can avoid wasting film at this step by capping the lens or by inserting a shutter plate into the camera.
- If the digital processor beeps 5 times in succession and the message "PC ERROR" appears, recheck the camera connections, then start over again from step 2.

5 Take the picture in the usual manner.

Note

If an error message appears while taking pictures, follow the instructions given in the table below.

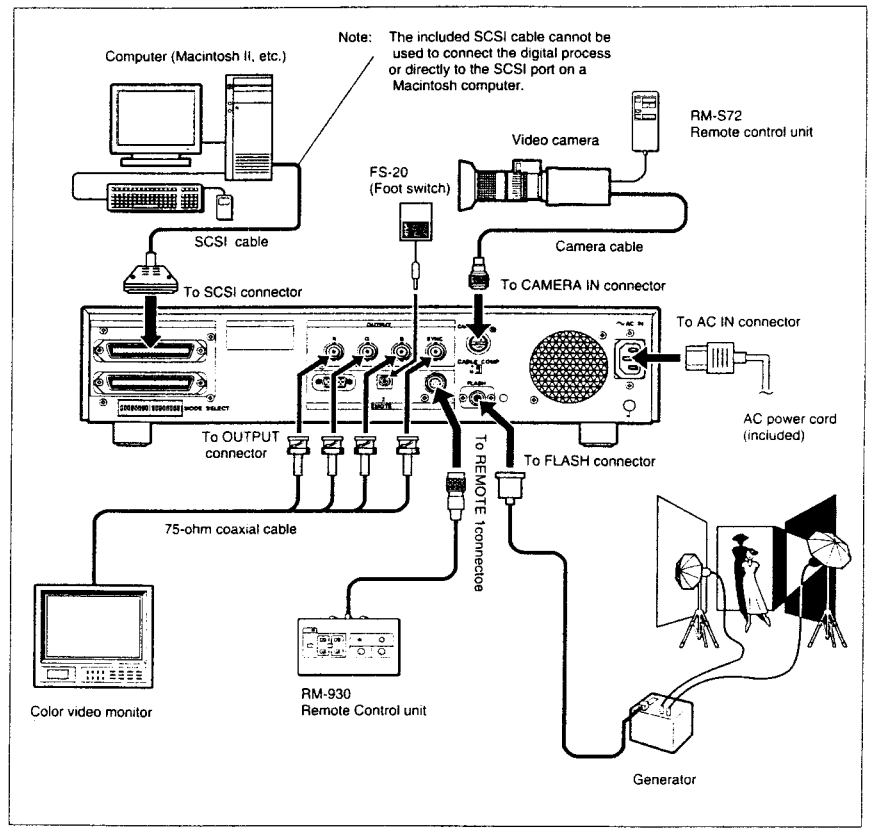
Error message	Explanation
PC ERROR	The camera signal was not input to the PC IN terminal. Re-check the camera connections.
SYNCHRO ERROR	Image grabbing was not successfully synchronized with the main camera. If this occurs, the trained time-lag is reset. Inspect the main camera, then start over from step 2 above.

Changing the main camera

When you change main cameras, you must re-train the digital processor for the main camera's time lag. To do this, reset the time lag by selecting Preset in the camera menu, then do steps 2 through 5 above with the new main camera.

1-10. CONNECTIONS

This section explains how to connect all system components. Depending on your application, some devices may not be needed in your system. To check which devices you should connect, please refer to the devices shown in the application examples given at the beginning of this manual. (page 7)



1-11. MAKING SCSI CONNECTIONS

This section explains how to connect the DKC-5000 to the SCSI port on a Macintosh computer.

Note
Up to 7 SCSI devices can be connected in series to the SCSI port of the Macintosh computer. The maximum cable length cannot exceed 6 meters.

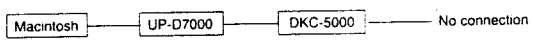
About the cable

To connect the digital processor to a Macintosh, please purchase the appropriate SCSI cable from any Macintosh dealer.
To add the DKC-5000 to an existing chain of SCSI devices, use the SCSI cable provided with the digital processor.

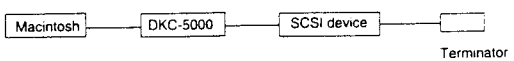
Note
If the device to which you will be connecting the digital processor has high-density SCSI connectors, you will need to purchase a cable that has a high-density 50-pin connector on one end and a full-size 50-pin connector on the other end.

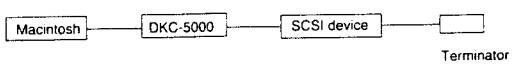
About terminators

The DKC-5000 is equiped with a built-in high performance active SCSI terminator. If you do not have a SCSI terminator, connect the DKC-5000 to the end of your SCSI device chain.



If you will be using the DKC-5000 with an external terminator, or if the DKC-5000 is not the last device in the SCSI device chain, disable the built-in terminator by setting DPI switch 2 to OFF.





Note
No more than 3 terminators may be used within a single SCSI chain.

About the SCSI ID

When connecting multiple SCSI devices in a chain, care must be taken to ensure that each has a unique SCSI ID in the range from 0 to 7. Set the digital processor's SCSI ID with DIP switches 1-6 to 1-8. ("Setting DIP switches" page 40)

Note
SCSI IDs 7 and 0 are reserved for the Macintosh system unit and its internal hard disk drive. SCSI IDs set for the various devices have no relation to the physical sequence of the devices within the SCSI device chain.

Making SCSI connections

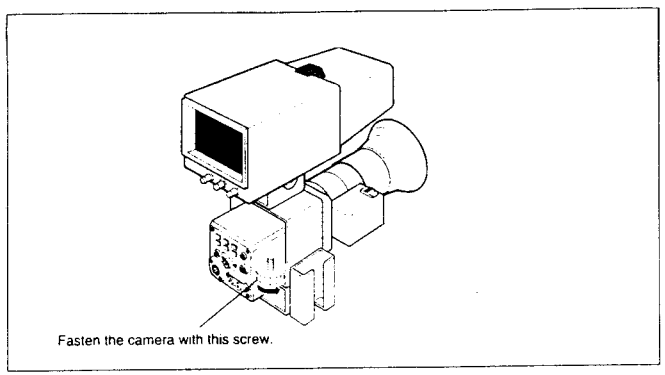
1. Turn off all connected devices and the Macintosh computer.
2. Plug the SCSI cable into the SCSI connector on the DKC-5000. If the cable has two different connector sizes, plug the end with the full-size 50-pin SCSI connector into the DKC-5000. Close the connector clips on the DKC-5000 to lock the connector in place.
3. Plug the other end of the cable into the Macintosh or other SCSI device. Fasten the connector with the connector clips or screws.

1-12. SETTING UP THE CAMERA

Two different camera orientations, portrait (upright) and landscape (horizontal), are possible according to the type of pictures you want to take. The procedure for attaching the camera and viewfinder to the tripod adapter differs according to the orientation you want to use.

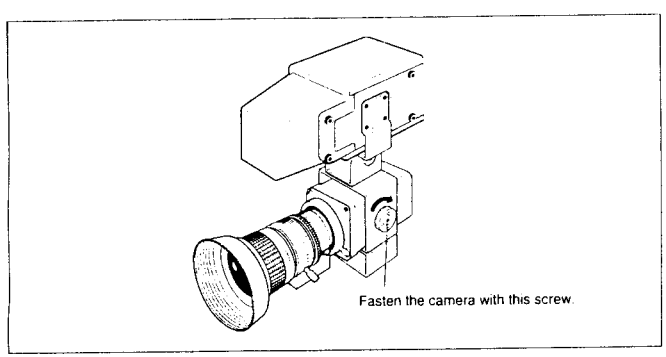
For landscape orientation

Attach the camera and viewfinder as follows when you want to take landscape orientation photos.



For portrait orientation

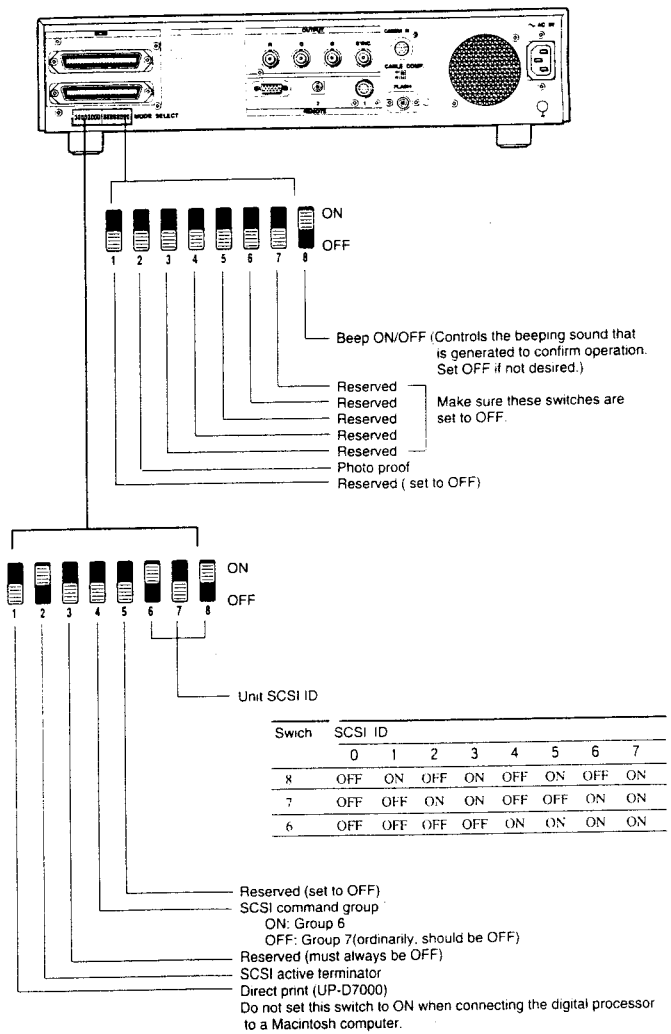
Attach the camera and viewfinder as follows when you want to take portrait orientation phots.



Please refer to the instructions included with the VCT-S20 tripod adapter for how to attach the camera and viewfinder.

1-13. SETTING DIP SWITCHES

Two banks of DIP switches are located on the digital processor's rear panel. Functions of these switches are as explained below.


ON
OFF
1 2 3 4 5 6 7 8
Beep ON/OFF (Controls the beeping sound that is generated to confirm operation. Set OFF if not desired.)
Reserved
Reserved
Reserved
Reserved
Reserved
Make sure these switches are set to OFF.
Photo proof
Reserved (set to OFF)
ON
OFF
1 2 3 4 5 6 7 8
Unit SCSI ID
Reserved (set to OFF)
SCSI command group
ON: Group 6
OFF: Group 7(ordinarily, should be OFF)
Reserved (must always be OFF)
SCSI active terminator
Direct print (UP-D7000)
Do not set this switch to ON when connecting the digital processor to a Macintosh computer.

Swich	SCSI ID							
	0	1	2	3	4	5	6	7
8	OFF	ON	OFF	ON	OFF	ON	OFF	ON
7	OFF	OFF	ON	ON	OFF	OFF	ON	ON
6	OFF	OFF	OFF	OFF	ON	ON	ON	ON

Note

Before setting the DIP switches, turn off the power.

1-14. CHANGING THE CAMERA SETTING

Camera settings such as the color temperature conversion characteristic and electronic shutter speed are changed by means of menus that is displayed on the screen of the viewfinder or monitor. Two menus are used, the normal menu and the Set Up menu.

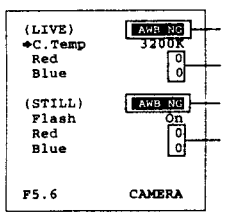
Normal menu

The normal menu is used for setting the camera's color temperature conversion characteristic, whether or not flash is used, and the RED and BLUE gain.

Notes

- When Flash is OFF: The C.Temp setting and Red and Blue gain are the same in the STILL mode as in the LIVE mode.
- When Flash is ON: The STILL mode's Red and Blue gain settings can be made independently of the LIVE mode. The STILL mode's C.Temp is automatically set to 5,600K, regardless of the LIVE mode C.Temp setting.

You can turn normal menu display on and off in the viewfinder and monitor by pressing the MENU button.



Displayed only when white balance adjustment fails.

After white balance adjustment, the values displayed are 00 regardless of whether or not white balance adjustment is successful.

Displayed only when white balance adjustment for flash photography fails.

Displayed only when Flash On is selected. After white balance adjustment, the values displayed are 00 regardless of whether or not white balance adjustment is successful.

Meanings of the various parameters are as follows.

(LIVE): Indicates that settings being made are for the LIVE mode.

(STILL): Indicates that the settings being made are for the STDBY mode.

C.Temp: Indicates the color temperature conversion characteristic. Available settings are 3200K and 5600K. (The 3200K setting is for use with tungsten lighting, and the 5600K setting is for use with sunlight and fluorescent light.)

Red: Indicates the red gain setting. Ordinarily, this setting does not need to be changed once white balance has been adjusted as described later.

Blue: Indicates the blue gain setting. Ordinarily, this setting does not need to be changed once white balance has been adjusted as described later.

Flash: Select On to use the flash, or Off if the flash is not to be used.

Note

Flash Off cannot be selected when the photo proof mode is ON.

Procedures for changing the parameter settings are as follows.

1 Select the parameter to be changed.
Pressing the FUNCTION UP button on the camera moves the arrow upward, and pressing the FUNCTION DOWN button moves the arrow downward. Move the arrow to the parameter you want to change. If a parameter has a fixed setting, the arrow skips over that parameter.

2 Set the desired value.
You can change the value displayed by pressing the DATA UP and DATA DOWN buttons on the camera. Display the value desired.

3 Repeat steps 1 and 2 to change other parameters as desired.

4 Conclude parameter setting.
Pressing the MENU button cancels menu display and concludes parameter setting.

Set Up menu

With no menu displayed, press and hold the camera's MENU button for at least 3 seconds to display the Set Up menu.
The Set Up menu has four setting screens. From any screen, pressing the MENU button cancels menu display.
When the arrow is at [SET-UP], you can change to the preceding (or following) SETUP screen by pressing the DATA UP or DATA DOWN button.

Procedures for setting the various parameters are as follows.

1 Select the parameter to be changed.
Pressing the FUNCTION UP button on the camera moves the arrow upward, and pressing the FUNCTION DOWN button moves the arrow downward. Move the arrow to the parameter you want to change. If a parameter has a fixed setting, the arrow skips over that parameter.

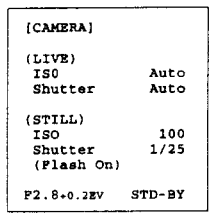
2 Set the desired value.
You can change the value displayed by pressing the DATA UP and DATA DOWN buttons on the camera. Display the value desired.

3 Repeat steps 1 and 2 to change other parameters as desired.

4 Conclude parameter setting.
Pressing the MENU button cancels menu display and concludes parameter setting.

Set Up-Camera

This menu is used for displaying and setting the ISO and shutter speed to be used in the CAMERA mode.



(LIVE): Indicates that the settings being made are for the LIVE mode.

(STILL): Indicates that the settings being made are for the STILL mode.

ISO: Sets the ISO speed of the camera. Settings are 100, 200, 400, 800, and Auto (available only in the LIVE mode). When using an exposure meter with flash photography, set the iris after verifying the camera's ISO setting. Since you may need to change the ISO setting somewhat depending on photographic conditions, it is a good idea to check lighting with an exposure meter before taking pictures.

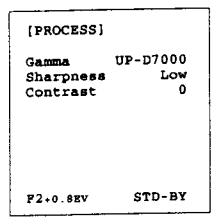
Shutter: Determines the speed of the camera's electronic shutter. In the LIVE mode, available settings are from 1/25 to 1/10000 and Auto.
In the STILL mode, available settings with Flash Off are 4 seconds to 1/10000. The speed is fixed to 1/25 when Flash On is selected in the normal menu.

Notes

- When the STILL mode shutter speed is set to 1/15 to 4 seconds, the actual amount of time required to grab an image after RELEASE is pressed is approximately twice the set value.
- When the STILL mode shutter speed is set to 1 second or more, the monitor displays "WAIT" when RELEASE is pressed.
- When the STILL mode shutter speed is set to 1/15 second or more, noise may appear in images grabbed into memory.

Set Up-Process

This menu is used for setting various characteristics of the digital processor and for turning camera W.Clip on or off.



Gamma: Sets gamma compensation. Six settings are available as follows.

UP-D7000	Value suitable for the UP-D7000 printer
ON	Value suitable for monitor display
OFF	Linear response
USER 1	User-defined value
USER 2	User-defined value
USER 3	User-defined value

Set from the computer. Factorysettings are the same as with ON.

Notes

- When using the UP-D7000 printer, the UP-D7000 setting provides smoothest representation of all shades from white to black. Use the ON mode when you want images with greater contrast.
- The OFF mode is provided to support connection to devices such as printers. The User1, User2, and User3 modes are provided to allow creation of original gamma compensation curves. (page 50)

Sharpness: Sets the degree of outline enhancement. Settings are OFF, Low, Mid, and High.

Notes

- The Sharpness setting cannot be changed during transfer of image data to the Macintosh or UP-D7000.
- Since this setting only pertains to sharpness enhancement, changing it does not affect the image appearing on the monitor.

Contrast: Sets the image contrast. Settings are from −127 to +127. The greater the value, the stronger the contrast.

Set Up-Mode

This menu is used for making other settings.

```
+[MODE]

 Lens        712BXS
 Flash Intvl  3sec
 Release      Cont
  Endless       On
  Iris Open    Off

F11+0.8EV    STD-BY
```

These two items do not appear when the release mode selected is Single.

Lens: Use this parameter to indicate whether the lens being used is one made especially for this system (the VCL-712BXS zoom lens) or some other lens. Available settings are 712BXS and Others.

The iris setting changes as indicated below according to whether you are using the VCL-712BXS or an other lens.

712BXS: CLOSE to F1.4 (in 0.2-EV steps)
Others: 0 to 51 (where 0 is fully closed and 51 is fully open)

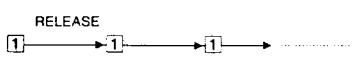
Flash Intvl: This parameter determines the interval (in seconds) at which the flash is triggered when adjusting white balance for flash photography. Settings are 3, 5, 7, and 10 seconds. Select a value according to the capacity of your flash's charger.

Note

Please note that automatic adjustment will not work properly unless the set flash interval exceeds the charging time of the flash.

Release: Determines whether or not the selected memory is switched automatically when the RELEASE button is pressed.

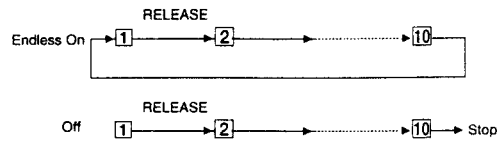
Single: With this setting, the image grabbed upon pressing the RELEASE button is stored in the currently selected memory, and the selected memory does not change. Therefore, each time you press the RELEASE button, the image contained in the currently selected memory is replaced with a new one.



Note

The SINGLE mode cannot be selected while in the photo proof mode.

Cont With this setting, the currently selected memory is incremented by one after image grabbing. Thus, each time the RELEASE button is pressed, the image grabbed is stored in a different memory. Operation when the highest memory number is reached differs according to the setting of the Endless parameter.



Endless: Determines the memory switching method.

On With this setting, memory switching is cyclic. That is, memory 1 follows memory 2 (memory 10 if the DKB-5008 is installed) when you press the RELEASE button the + button.

Off With this setting, memory switching stops when the highest memory is reached. In other words, memories are not switched if the RELEASE button or + button is pressed when the highest memory is selected. A beep sounds and the monitor displays "End of Mem." when an image is grabbed into the highest memory.

Iris Open: Determines the state that follows pressing of the RELEASE button in the continuous (Cont) mode.

On Select this setting while using continuous photography when you want to remain in the CAMERA mode until you press the RELEASE button. (This setting is useful when you need to confirm picture composition on the monitor or viewfinder prior to each shot.)

Off Select this setting while using continuous photography when you want the camera to wait in the STDBY mode between exposures. This setting is useful when release timing is critical.

Note

The Iris Open mode cannot be turned Off while in the Photo Proof mode.

Set Up-Reset
This menu is used for restoring parameters to the factory settings.

Reset: Move the cursor to Reset, then press the DATA UP or DATA DOWN button to restore all parameters to the factory settings. The factory settings are as follows.

	Display mode:	CAMERA
	Focus:	Center
	Zoom:	WIDE
	Iris:	F5.6
• Nomal menu		
(LIVE)	C.TEMP:	3200K
	Red:	0
	Blue:	0
(STILL)	Flash:	On
	Red:	0
	Blue:	0
• SET UP menu		
(CAMERA)		
(LIVE)	Iso:	AUTO
	Shutter:	AUTO
(STILL)	Iso:	100
	Shutter:	1/25
(PROCESS)	Gamma:	UP-D7000
	Sharpness:	Low
	Contrast:	0
(MODE)	Lens:	VCL-712BXS
	Flash Intvl:	3 sec
	Release:	Single

Note
When Photo Proof is On, Cont is selected, Endless is Off, and Iris Open is On.

(PRINT)	Layout:	Full

The Photoshop plug-in module included with the DKC-5000 provides four control panels as follows.

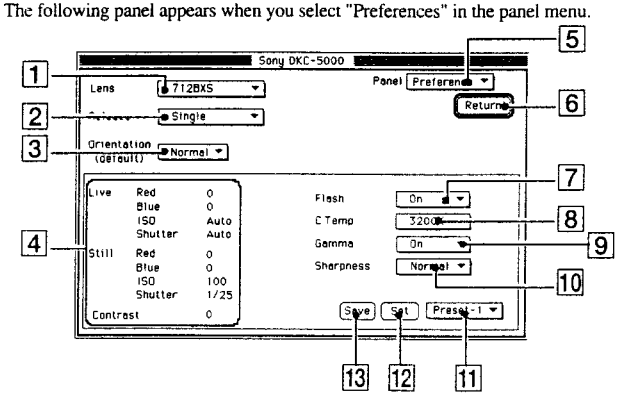
- Preferences panel
  This panel is used for setting up the camera and digital processor operating parameters.
- Table Selection panel
  This panel is used for selecting the digital processor's look-up table (camera or monitor).
- Image Information panel
  Sets frame memory information display and the crop area. Also used for transferring image data to Photoshop.
- Image List panel
  This panel shows miniatures of images contained in frame memory. It is also used for transferring multiple images to Photoshop.

Switching between control panels is done by means of the Panel menu at upper right. The menus of individual panels and functions of buttons in the panels are explained below.

Functions of Panels

Preferences panel

The following panel appears when you select "Preferences" in the panel menu.



Functions of the menus and buttons in this panel are as follows.

1 Lens menu
Specifies the type of lens being used with the camera. You can select either 712BXS or Others. This is the same as the camera Set Up-Mode menu.

2 Release menu
Specifies the release mode of the camera when using the remote control unit.

3 Grab direction (default) menu
Specifies the default setting for the direction of image grabbing.

4 Parameter display box
Displays the camera operating parameters.

5 Panel menu
Specifies the type of control panel to be displayed.

6 [Return] button
Returns display to the previous panel.

7 Flash menu
Turns the flash on or off. Settings are the same as with the Flash parameter in the camera normal menu.

8 C.Temp menu
Specifies the color temperature during live display. Settings are the same as with the C.Temp parameter in the normal camera menu.
You can select either 5600K or 3200K.

9 Gamma menu
Specifies the Gamma table to be used. Settings are the same as with the Gamma parameter in the camera's Set Up-Process menu.
Settings available are UP-D7000, ON, OFF, USER 1, USER 2, and USER 3.

UP-D7000	Value suitable for the UP-D7000 printer
ON	Value suitable for monitor display
OFF	Linear response
USER 1	User-defined value
USER 2	User-defined value
USER 3	User-defined value

10 Sharpness menu
Specifies the degree of sharpness. This is the same as the camera Set Up-Process menu.

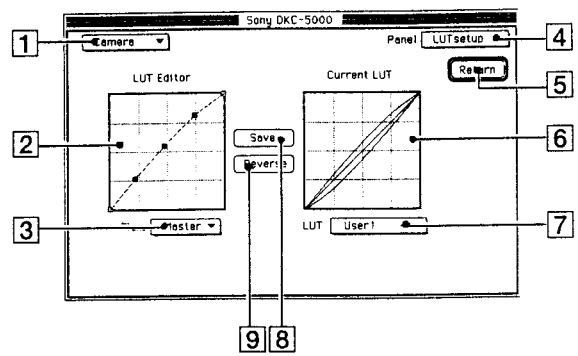
11 Parameter setting menu
Used for selecting the camera operating parameter number. Values available are from 1 to 5.

12 [Set] button
Used for setting operating parameters selected in the parameter setting menu to the digital processor.

13 [Save] button
Used for saving the DKC-5000 camera control parameters. Parameters numbered 1 to 5 in the parameter setting menu can be saved.

Table Settings panel

The following panel appears when you select "Table Settings" in the Panel menu.



The menus and buttons in this panel are as follows.

1 Camera/Monitor menu
Specifies the type of look-up table to be used.
Allows selection of the Camera (input) and Monitor (output).

Possible LUT combinations
Six pre-determined LUT combinations of input (Camera) and output (Monitor) are provided as follows.

LUT Gamma	Input (Camera)	Output (Monitor)
UP-D7000	Fixed	Fixed
ON	Fixed	Fixed
OFF	Fixed	Fixed
User 1	Arbitrary	Arbitrary
User 2	Arbitrary	Arbitrary
User 3	Arbitrary	Arbitrary

Two LUTs are used, one for input (Camera) and one for output (Monitor). The input LUT is used for adjusting the tone of the input signal from the camera. The output LUT is used for adjusting coloration of output to suit a Macintosh display or printer.
The User LUTs make it possible for the user to use the Macintosh to define any desired curves for input and output.
Upon shipment from the factory, the curves set in User 1, 2, and 3 are all the same as the Gamma: ON curves. These settings are maintained for about 10 years even when the power is turned off. The settings can be re-written approximately 10,000 times. ("Digital processor block diagram" page 60)

2 LUT editor
Allows arbitrary curves to be created by moving 5 points with the mouse.

3 Plane menu
Specifies the LUT (look-up table) plane.
Allows selection of Master, R, G, or B. When Master is specified, R, G, and B all have the same curve.

4 Panel menu
Specifies the type of control panel to be displayed.

5 [Return] button
Returns display to the previous panel.

6 LUT display box
Displays the user-defined table specified in the LUTmenu.

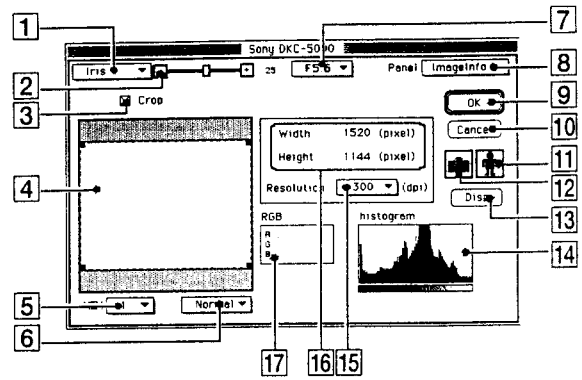
7 LUT menu
Specifies the number of the user defined table.
Selections available are User 1, User 2, and User 3.

8 [Save] button
Saves the curve created with the LUT editor to the user-defined table specified in the LUT menu.

9 [Reserve] button
Flips (inverts) and saves the user-defined table specified from the LUT menu.

Image information panel

The following panel appears when you select Image Information in the Panel menu.



Functions of the menus and buttons in this panel are as follows.

1 Camera control menu
Displays control bars for specifying the camera control type.

2 Camera control bars
Used for specifying a variety of camera control values.

3 Crop check box
Turns the cropping function on or off.

4 Miniature display box
Displays the contents of the selected memory.
When the mouse cursor is located on top of the miniature display, values appear in the RGB indicator box.
When the cropping function is turned on, the crop area is displayed and the size and position of the cropping area can be specified with the mouse.

5 Memory selection menu
Used for specifying the image memory number.

6 Rotation selection menu
Specifies the direction of image rotation. Selections are None, Rotate right, and Rotate left.

7 Iris menu
Specifies the camera's iris setting (F number). This menu is valid only when using the DKC-5000's special lens, the VCL-712BXS.

8 Panel menu
Specifies the type of control panel.

9 [OK] button
Initiates transfer of image data to Photoshop. Only the image selected in the MEM menu is transferred.

10 [Cancel] button
Cancels operation of the input module.

11 MONITOR button [ ]
Switches the display mode (CAMERA/STANDBY)of the monitor.

12 SHOOT button [ ]
Grabs an image into frame memory. This performs the same function as the camera's RELEASE button.

13 [Disp] button
Redisplays the miniature images.

14 Histogram display box
Displays a histogram of data in the selected image memory.

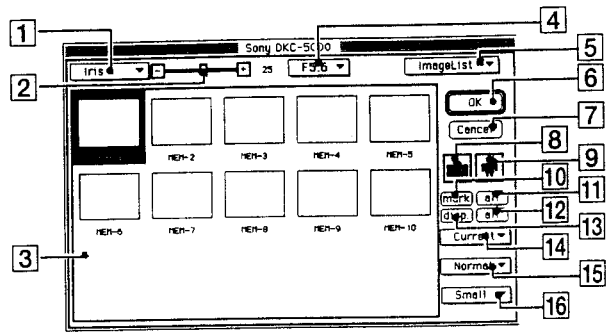
15 Resolution menu
Indicates the resolution of the image.

16 Image size indicator box
Displays the image size.

17 RGB indicator box
Displays the RGB values of the location in the image at which the mouse cursor is located. (Effective only when using full-color display.)

Image list panel

The following panel appears when you select Image List in the Panel menu.



The panel shown above is the one that appears when the DKB-5008 is installed.

Functions of the menus and buttons in this panel are as follows.

1 Camera control menu
Displays control bars for specifying the camera control type.

2 Camera control bars
Used for specifying a variety of camera control values.

3 Image list
Displays contents of memory as miniature images.
You can select a memory by clicking on the corresponding miniature with the mouse.

4 Iris menu
Specifies the camera's iris setting (F number). This menu is valid only when using the DKC-5000's special lens, the VCL-712BXS.

5 Panel menu
Specifies the type of control panel.

6 [OK] button
Initiates transfer of image data to Photoshop. All marked images are transferred.

7 [Cancel] button
Cancels operation of the input module.

8 SHOOT button [ ]
Grabs an image into the selected memory. With the Single mode, grabbing an image does not change the selected memory. Release timing is not determined by the settings in the Preferences menu.

9 MONITOR button [ ]
Switches the display mode of the monitor to CAMERA or STANDBY.

10 [mark] button
Marks images for transfer.

11 Mark [all] button
Marks all images for transfer.

12 Display [all] button
Re-displays all images in frame memory.

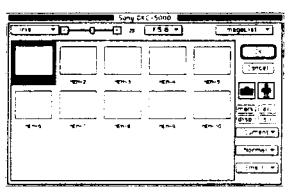
13 [Disp] button
Re-displays the image in the selected memory.

14 Memory select menu
Selects the memory selection method used during photography. Choices available are "Don't Move" and "Move". When you select "Move", selection changes to the next memory after release using the SHOOT button.

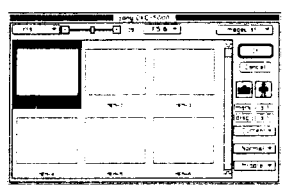
15 Rotation selection menu
Selects the direction of image rotation. Selections are None, Rotate right, and Rotate left.

16 Miniature image selection menu
Selects the size of miniature images. Selections available are Small, Medium, and Large.

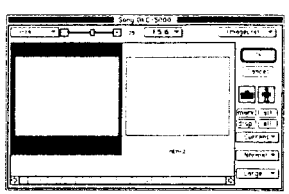
Small miniatures



Medium miniatures



Large miniatures



1-16. MESSAGES

Meanings of ordinary messages and error messages are as follows.

Memory mesages	Meaning/remedy
End of Mem	Indicates that images have been grabbed into all available memories, and that no further photos can be taken. Displayed when the RELEASE mode is Cont and Endless is set OFF.
No Free Mem	Displayed in the Cont RELEASE mode when no memory is available for grabbing images. When the Endless RELEASE mode is ON, appears when all memories are marked with X. When the Endless RELEASE mode is OFF, appears when all memories following the last one containing image data are marked with X.
Protected	An attempt was made to grab an image into a memory that has an X mark displayed beside it in the mode display. Select a different memory.

Printer Messages	Meaning/remedy
Printer Not Found	The UP-D7000 was not found. Check that its power is turned on and that its SCSI connections are properly made. (page 37)
Printer Not Ready	The UP-D7000 is not ready to print. If it is not already printing, check whether the printer is out of paper or ribbon.
Printer Error	An error occurred during transfer of image data to the UP-D7000. Turn the UP-D7000's power off momentarily, then try again.
Empty Mem	An attempt was made to print out the contents of a memory that does not contain any image.

Photo proofing messages	Meaning/remedy
Push [RELEASE]	Displayed when in the Photo Proof mode if the time lag has not been set, or the time lag set has been reset. Train the digital processor for the shutter time lag by pressing the RELEASE button.(page 34)
OK	The shutter time lag has been properly stored.
PC ERROR	No signal is present at the PC IN connector. Check the main camera connections.(page35)
SYNCHRO ERROR	Image grabbing could not be synchronized with the main camera. Check the status of the main camera.

Self-diagnostic messages	Meaning/remedy
SELF TEST	Self test execution in progress. Wait until execution is completed. *The self test cannot be executed unless a SCSI command is used.
OK	No malfunction detected.
NG	Malfunction detectead.

Other messages	Meaning/remedy
WAIT	Processing in progress will take a moment. Wait for completion.
NO SYNC	No video signal is being received from the camera. Check the camera connections. (pages 33 and 36)
Remote	The RM-930's CAMERA/REMOTE switch is set to REMOTE. In order to control operation from the camera, you must either set the CAMERA/REMOTE switch to CAMERA (page 68), or disconnect the RM-930.

1-17. TROUBLESHOOTING

Check before calling for service. If the equipment does not function as expected, please review the following checklist for symptoms and possible causes and remedies. If you cannot solve the problem or the trouble reoccurs, contact your Sony dealer for assistance.

Symptom	Cause/remedy
Power will not go on.	Make sure that the power cord is plugged in securely. (page 36)
Buttons on the RM-S72 do not work.	Make sure that the cable is securely connected. (pages 36 and 63)
Photo images taken are blurred.	Blurring occurs when photographing fast-moving subjects. This is not a problem with the equipment.
Images from the camera are not clear.	Check whether the CABLE COMP switch is correctly set. (page 65)
The appearance of the monitor image does not change when you change the camera settings.	Is the monitor displaying an image in memory?
The PRINT menu does not appear when you press the PRINT key.	• Is display in the MEMORY mode? • Have you already started printing? • Are the DIP switches set correctly?
Changing the iris setting does not affect the iris of the lens.	• Is display in the STAND BY mode? • Is the lens aperture switch set to AUTO?
When you bring an image from memory into the computer, the gradations appearing differ markedly from those shown by the monitor.	Is Gamma set to On? With Gamma settings other than On, the monitor LUT is adjusted so that display of gradations by the monitor is optimized for images displayed from memory. Accordingly, gradations of images displayed from memory may differ from those displayed by the monitor.
Gradations of images grabbed into memory look strange on the monitor.	Did you change the Gamma setting after taking the photographs? As indicated above, use of different Gamma settings during photography and display from memory will cause the appearance of images to change on the monitor.
When taking photographs in the Flash On mode, the screen flickers momentarily while the image is being grabbed.	This is not a malfunction.
The color temperature of LIVE images sometimes varies under fluorescent lighting.	This is not a malfunction. What is happening is that the electronic shutter is responding to periodic variations in light level from the fluorescent lighting. This is not a malfunction. Although this phenomenon does not present a problem when using flash, the best way to avoid it with Flash Off is to use tungsten lighting to the maximum extent possible.
Even when settings are changed, the dynamic range of image data transferred to the computer does not extend over the full range from 0 to 255.	Specifications of the A/D conversion circuit are actually for a dynamic range of somewhat less than 0 to 255.
Unable to correctly reassemble pieces of an image on the computer after using the cropping function to send that image to the computer a piece at a time.	The sharpness enhancement function causes variations at dot boundaries that prevent this method from working properly.